UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,387	06/30/2003	Haruhiro Yuki	2003_0870A	7963

513 7590 08/10/2005

WENDEROTH, LIND & PONACK, L.L.P.
2033 K STREET N. W.
SUITE 800
WASHINGTON, DC 20006-1021

EXAMINER	
ROY, SIKHA	

ART UNIT	PAPER NUMBER
2879	

DATE MAILED: 08/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/608,387	YUKI ET AL.	
	Examiner	Art Unit	
	Sikha Roy	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 May 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *6-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 June 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

The Amendment, filed on May 25, 2005 has been entered and is acknowledged by the Examiner.

Cancellation of claims 1-5 and new claims 6-13 have been entered.

The examiner notes that the drawing of Fig. 8 labeled with a legend 'Prior Art' has not been received.

Claim Objections

Claim 6 is objected to because of the following informalities:

The limitation 'wherein a thickness of said dielectric layer in a direction in which two parallel-disposed electrodes face each other' is objected because the thickness of the dielectric layer as claimed depends on the shape of the gap not covered by dielectric layer and will vary if the gap is not of a regular shape and in that case it is not clear how the claimed thickness is measured. The examiner assumes that this thickness (B in Fig. 3) of the dielectric layer is between the end of the discharge electrode and the protective layer at the top end of the gap.

Further clarification of the thickness of the dielectric layer measured in a direction in which two parallel electrodes face each other, is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 8 - 13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Referring to claim 8 the limitation of 'the resistance value of the float electrode in a direction in which two parallel-disposed electrodes face each other is not less than a resistance value of the float electrode in a direction parallel to the display electrode' was not described in specification. The specification discloses (page 8 lines 10-12) the resistance of the float electrode increases in a direction where the float electrode crosses the display electrode at right angles and the resistance value is high. The examiner agrees that this direction where the float electrode crosses the display electrode at right angles (as in specification) is same as the direction in which two parallel disposed electrodes face each other as claimed. But there is no mention in the specification of the resistance of float electrode in the direction parallel to the display electrodes.

Claims 9-13 are rejected because of their dependency status from claim 8.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,525,470 to Amemiya.

Amemiya discloses (Figs. 2,3 column 2 lines 43-67) a plasma display panel comprising a first substrate 11, a display electrode comprising plurality of parallel-disposed electrodes X, Y on the first substrate so as to form a discharge gap in between, a dielectric layer 14 covering the first substrate and the display electroders X, Y and not covering at least a part 21 of the discharge gap G, a protective layer 15 covering the dielectric layer 14 and the discharge gap, a second substrate 16 wherein the display electrodes X,Y face the second substrate, display electrode D disposed on the second substrate 16 facing the first substrate and oriented to cross under the parallel disposed display electrode.

Claim 6 differs from Amemiya in that Amemiya does not explicitly disclose the thickness of the dielectric layer between the end of the display electrode and the protective layer at the top end of the gap measured in a direction in which the two electrodes face each other is less than the thickness of the dielectric layer in a direction in which the display electrode faces the second substrate.

Amemiya discloses (column 3 lines 7-21) since the dielectric layer 14 is not formed in the vacant space 21, the discharge gap G in the discharge space approaches the electrodes X,Y. When a voltage is applied, the density of the equi-potential lines is high in the discharge gap (Fig.3), strength of the electric field in the discharge gap G in the discharge space 18 is increased and thus it is possible to reduce the start voltage. Hence the smaller is the thickness of the dielectric layer between the electrode X,Y and the vacant space 21 measured in the direction in which X,Y face each other the less is the starting voltage. Furthermore in an AC plasma display panel, the thickness of the dielectric layer in a direction in which the display electrode faces the second substrate protects the electrodes X,Y from the impact of the discharge. Therefore it will be obvious to one of ordinary skill in the art at the time of invention to have the thickness of the dielectric layer between the electrode and the vacant space measured in a direction in which the parallel-disposed electrodes face each other smaller than the thickness of the dielectric (for protecting the electrodes) in a direction in which the display electrodes face the second substrate for reducing the starting voltage of the display panel.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,525,470 to Amemiya and further in view of JP 2001006562 to Kasahara et al.

Claim 7 differs from Amemiya in that Amemiya does not exemplify a transparent float electrode disposed at part of the discharge gap not covered by the dielectric layer such that the float electrode is electrically isolated from the display electrode and the protective layer covers the float electrode.

Kasahara in analogous art of AC plasma display panel discloses (Fig. 1 , abstract) a transparent float electrode 17 (of a floating potential) formed in the discharge gap in the middle area of the display electrodes 8,9 formed on the front substrate. Kasahara further discloses this configuration of the float electrode with floating potential formed in the middle region of the display electrodes provides the plasma display panel of high quality with high efficiency at reasonable prices by improving light emitting efficiency keeping the start and maintaining the discharge voltages low.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to include the transparent float electrode disposed at the vacant space of the discharge gap and hence not covered by the dielectric layer between the display electrodes of Amemiya as taught by Kasahara for providing the plasma display panel of high quality with high efficiency at reasonable prices by improving light emitting efficiency keeping the start and maintaining the discharge voltages low.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 6,483,491 to Lee discloses plasma display panel having a float electrode between two display electrodes with improved discharge efficiency and service life of phosphors.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sikha Roy whose telephone number is (571) 272-2463. The examiner can normally be reached on Monday-Friday 8:00 a.m. – 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S.R.

Sikha Roy
Patent Examiner
Art Unit 2879

Karabi Guharay

KARABI GUHARAY
PRIMARY EXAMINER